



1634

#1634

PATENT

ATTORNEY DOCKET NO: DIVER1280-14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:
Serial No.:
Filed:
Title:

William Michael Lafferty
09/894,956
June 27, 2001
CAPILLARY ARRAY-BASED SAMPLE SCREENING

Art Unit: 1634
Examiner: Betty J. Forman

Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL SHEET

Transmitted herewith for the above-identified application please find:

1. Information Disclosure Statement (2 pages);
2. Form PTO-1449 (3 pages);
3. Twenty-Three (23) United States Patents;
4. Eleven (11) Foreign Patents;
5. One (1) Other Documents;
6. Copy of Communication from Foreign Patent Office dated 1/31/03 (7 pgs);
7. Change of Attorney Address in Application (1 pg);
8. Check No. 533123 in the amount of \$180.00; and
9. Return Receipt Postcard.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date, March 28, 2003, in an envelope addressed to:
Commissioner for Patents, Washington, D.C. 20231.

Cecilia Tobin
(Name of Person Mailing Paper)
Cecilia Tobin March 28, 2003
(Signature) (Date)

PATENT
ATTORNEY DOCKET NO: DIVER1280-14

Applicant: William Michael Lafferty
Serial No.: 09/894,956
Filed: June 27, 2001
Page 2

Enclosed is Check No. 533123 in the amount of \$180.00 for the Information Disclosure Statement fee. The Commissioner is hereby authorized to charge any other required fees associated with the filing submitted herewith, or credit any overpayments to Deposit Account No. 50-1355. A duplicate copy of this sheet is enclosed.

Respectfully submitted,


Lisa A. Haile, J.D., Ph.D.
Registration No. 38,347
Telephone: (858) 677-1456
Facsimile: (858) 677-1465

USPTO CUSTOMER NUMBER 28213
GRAY CARY WARE & FREIDENRICH LLP
4365 Executive Drive, Suite 1100
San Diego, CA 92121-2133



PATENT
ATTORNEY DOCKET NO: DIVER1280-14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: William Michael Lafferty Art Unit:
Serial No.: 09/894,956 Examiner:
Filed: June 27, 2001
Title: CAPILLARY ARRAY-BASED SAMPLE SCREENING

Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. § 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, these references are listed on the attached Form PTO-1449 and a copy of each is enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

03/31/2003 BALANCE 00000016 09894956

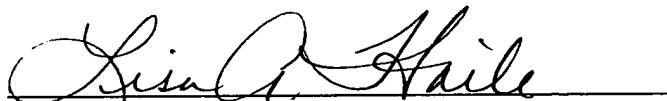
01 FC:1806

180-00 RP

Applicant: William Michael Lafferty
Serial No.: 09/894,956
Filed: June 27, 2001
Page 2

Enclosed is Check No. 533123 in the amount of \$180.00 for the Information Disclosure Statement fee. The Commissioner is hereby authorized to charge any other required fees associated with the filing submitted herewith, or credit any overpayments to Deposit Account No. 50-1355. A duplicate copy of this sheet is enclosed.

Respectfully submitted,


Lisa A. Haile, J.D., Ph.D.
Registration No. 38,347
Telephone: (858) 677-1456
Facsimile: (858) 677-1465

USPTO CUSTOMER NUMBER 28213
GRAY CARY WARE & FREIDENRICH LLP
4365 Executive Drive, Suite 1100
San Diego, CA 92121-2133

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Docket No.	Serial No.:
	DIVER1280-14	09/894, 956
Applicant(s): William Michael Lafferty		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: June 27, 2001	Group Art Unit: 1634

U.S. PATENT DOCUMENTS

EXAM. INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	4,276,048	06/30/81	Leaback			
	4,621,059	11/04/86	Rokugawa			
	5,853,984	12/29/88	Davis and Gold			
	5,274,240	12/28/93	Mathies et al.			
	5,584,982	12/17/96	Dovichi and Zhang			
	5,670,113	09/23/97	Akong et al.			
	5,675,155	10/07/97	Pentoney, Jr. et al.			
	5,741,411	04/21/98	Yeung et al.			
	5,763,263	06/09/98	Dehlinger			
	5,777,096	07/07/98	Grossman et al.			
	5,790,727	08/04/98	Dhadwal et al.			
	5,833,827	11/10/98	Anazawa et al.			
	5,843,767	12/01/98	Beattie			
	5,938,908	08/17/99	Anazawa et al.			
	5,958,672	09/28/99	Short			
	6,027,873	02/22/00	Schellenberger et al.			
	6,048,444	04/11/00	Takahashi et al.			
	6,054,032	04/25/00	Haddad and Lee			
	6,083,763	07/04/00	Balch			

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office <i>P-5</i> MAR 31 2003	Docket No. DIVER1280-14	Serial No.: 09/894, 956
	Applicant(s): William Michael Lafferty	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: June 27, 2001	Group Art Unit: 1634

		6,086,740	07/11/00	Kennedy			
		6,086,825	07/11/00	Sundberg et al.			
		6,090,251	07/18/00	Sundberg et al.			
		6,306,578 B1	10/23/01	Schellenberger and Liu			

FOREIGN PATENT DOCUMENTS

EXAM. INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION (YES/NO)
	WO 99/49315	09/30/90	PCT			
	WO 90/14590	11/29/90	PCT			
	WO 97/45730 A1	12/04/97	PCT			
	WO 98/04920	02/05/98	PCT			
	WO 98 28075 A1	07/02/98	PCT			
	WO 98/38490 A1	09/03/98	PCT			
	WO 98/58085	12/23/98	PCT			
	WO 99/10539	03/04/99	PCT			
	WO 99/34920	07/15/99	PCT			
	WO 99/39191 A1	09/05/99	PCT			
	WO 99/49294 A2	09/30/99	PCT			

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Docket No. DIVER1280-14	Serial No.: 09/894, 956
	Applicant(s): William Michael Lafferty	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: June 27, 2001	Group Art Unit: 1634



OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

	Wittrup et al., "Microencapsulation Selection for Isolation of Yeast Mutants with Increased Secretion of <i>Aspergillus awamori</i> Glucoamylase," <i>Biotechnology and Bioengineering</i> , 42 (3):351-356 (1993)
--	--

EXAMINER	DATE CONSIDERED
-----------------	------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
GRAY CARY WARE & FREIDENRICH LLP
 Attn. Haile, Lisa.A.
 4365 Executive Drive, Suite 1100
 San Diego, California 92121-2133
 UNITED STATES OF AMERICA

PATENT DOCKETING

FEB 05 2003

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

REGISTERED MAIL

Date of mailing (day/month/year)	31/01/2003
PAYMENT DUE	within 45 100 days from the above date of mailing
International filing date (day/month/year)	10/10/2001
Applicant	

Applicant's or agent's file reference

DIVER1280-17

International application No.

PCT/US 01/ 31806

Applicant

DIVERSA CORPORATION

1. This International Searching Authority

- (i) considers that there are 13 (number of) inventions claimed in the international application covered by the claims indicated ~~XXXX~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~XXXX~~ on the extra sheet:

- (ii) has carried out a partial international search (see Annex) will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

1-46 complete

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

<u>EUR 945,00</u>	x <u>12</u>	= <u>EUR 11.340,00</u>
Fee per additional invention	number of additional inventions	total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Anna Silberg

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-46 complete

method for identifying a polynucleotide in a liquid phase by using a library of nucleic acid sequences from one organism and (a) labeled probe(s).

2. Claims: 48-94 complete

screening method of libraries of mixed populations defined by the wording of the mentioned claims above

3. Claims: 95-104 complete

method defined by the wording of the mentioned claims above

4. Claims: 105-145 complete

method defined by the wording of the mentioned claims above

5. Claims: 146-164 complete

method defined by the wording of the mentioned claims above

6. Claims: 165-175 complete

apparatus defined by the wording of the mentioned claims above.

7. Claims: 176-185 complete

capillary and array defined by the wording of the mentioned claims above

8. Claims: 186-200 complete

method for incubating a bioactivity as defined by the wording of the mentioned claims above

9. Claims: 201-203 complete

method defined by the wording of the mentioned claims above

10. Claims: 203-208 complete

recovery apparatus defined by the wording of the mentioned claims above

11. Claims: 209, 210 complete

apparatus defined by the wording of the mentioned claims above

12. Claim : 211 complete

method defined by the wording of the mentioned claim above

13. Claim : 47 complete

method defined by the wording of the mentioned claim above

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

The ISA is of the opinion that due to the fact that the inventions listed above are not linked by a single general inventive concept and due to their essential differences and due that furthermore no technical features can be distinguished which, in the light of the prior art, could be regarded as special in the sense of Rule 13.2 PCT the requirements of unity of invention as laid down in Rule 13.1 PCT is not fulfilled.

The ISA has searched the first invention.

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- 1-46
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 10539 A (DIVERSA CORP) 4 March 1999 (1999-03-04) see whole doc. esp. claims and p.9,1.16-26	1-46
X	--- WO 98 58085 A (KELLER MARTIN ;SHORT JAY M (US); DIVERSA CORP (US)) 23 December 1998 (1998-12-23) see whole doc. esp. p.12, 1.21-p.14 1.13,;p.8,124-p.9, 1.7; c1.37	1-46
A	US 5 777 096 A (GROSSMAN PAUL DAVID ET AL) 7 July 1998 (1998-07-07) see whole doc. esp. claims	---
A	WITTRUP K D ET AL: "Microencapsulation selection for isolation of yeast mutants with increased secretion of Aspergillus awamori glucoamylase" BIOTECHNOLOGY AND BIOENGINEERING. INCLUDING: SYMPOSIUM BIOTECHNOLOGY IN ENERGY PRODUCTION AND CONSERVATION, JOHN WILEY & SONS. NEW YORK, US, vol. 42, no. 3, 1993, pages 351-356, XP002151519 ISSN: 0006-3592 the whole document	---
A	US 5 853 984 A (DAVIS KEN ET AL) 29 December 1998 (1998-12-29) see whole doc. esp. examples, cols.10 ff.	---
	---	-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 958 672 A (SHORT JAY M) 28 September 1999 (1999-09-28) see whole doc. esp. claims -----	
3		

Patent Family Annex

Information on patent family members

International Application No

PCT/US 01/31806

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9910539	A	04-03-1999	US 6057103 A AU 741139 B2 AU 8923198 A CA 2301601 A1 EP 1025262 A1 JP 2001514017 T WO 9910539 A1 US 2002037505 A1	02-05-2000 22-11-2001 16-03-1999 04-03-1999 09-08-2000 11-09-2001 04-03-1999 28-03-2002
WO 9858085	A	23-12-1998	AU 749587 B2 AU 8150298 A EP 1009858 A1 JP 2002505590 T US 2002080350 A1 US 2002102598 A1 US 2002150949 A1 WO 9858085 A1 US 6174673 B1 US 2001041333 A1 US 2002048809 A1 US 2001034040 A1 US 2002001809 A1 US 2002127560 A1 US 2001034031 A1 US 2002015997 A1	27-06-2002 04-01-1999 21-06-2000 19-02-2002 27-06-2002 01-08-2002 17-10-2002 23-12-1998 16-01-2001 15-11-2001 25-04-2002 25-10-2001 03-01-2002 12-09-2002 25-10-2001 07-02-2002
US 5777096	A	07-07-1998	US 5514543 A US 5470705 A AT 173767 T AT 159765 T DE 69314946 D1 DE 69314946 T2 DE 69322266 D1 DE 69322266 T2 DK 635069 T3 EP 0636186 A1 EP 0635069 A1 JP 2775346 B2 JP 7505529 T JP 2701092 B2 JP 8504082 T WO 9320236 A1 WO 9320239 A1 US 5580732 A US 5624800 A US 5989871 A US 5703222 A US 5807682 A	07-05-1996 28-11-1995 15-12-1998 15-11-1997 04-12-1997 02-04-1998 07-01-1999 02-06-1999 20-07-1998 01-02-1995 25-01-1995 16-07-1998 22-06-1995 21-01-1998 07-05-1996 14-10-1993 14-10-1993 03-12-1996 29-04-1997 23-11-1999 30-12-1997 15-09-1998
US 5853984	A	29-12-1998	US 5496938 A US 5472841 A US 5683867 A US 5475096 A AU 6147096 A EP 0832299 A1 WO 9641019 A1 AU 689087 B2 AU 5441194 A	05-03-1996 05-12-1995 04-11-1997 12-12-1995 30-12-1996 01-04-1998 19-12-1996 26-03-1998 26-04-1994

Patent Family Annex

Information on patent family members

International Application No

PCT/US 01/31806

Patent document cited in search report	Publication date		Patent family member(s)	Publication date	
US 5853984	A		CA 2145761 A1 EP 0668931 A1 JP 8501943 T US 2002172962 A1 US 6124449 A WO 9408050 A1 US 6344318 B1 US 5849479 A US 5503978 A US 5648214 A US 5629155 A US 5756287 A US 6346611 B1 US 6232071 B1 US 5622828 A US 6184364 B1 US 5660985 A US 5750342 A US 5688935 A US 5763566 A US 5712375 A US 5789157 A US 5864026 A US 5637682 A US 5734034 A US 5595877 A US 5587468 A US 5786462 A US 5811533 A US 5726017 A US 5731144 A US 5731424 A US 5837834 A US 5846713 A US 5686592 A US 5766853 A US 6001988 A US 5972599 A US 5635615 A US 5654151 A US 5780228 A	14-04-1994 30-08-1995 05-03-1996 21-11-2002 26-09-2000 14-04-1994 05-02-2002 15-12-1998 02-04-1996 15-07-1997 13-05-1997 26-05-1998 12-02-2002 15-05-2001 22-04-1997 06-02-2001 26-08-1997 12-05-1998 18-11-1997 09-06-1998 27-01-1998 04-08-1998 26-01-1999 10-06-1997 31-03-1998 21-01-1997 24-12-1996 28-07-1998 22-09-1998 10-03-1998 24-03-1998 24-03-1998 17-11-1998 08-12-1998 11-11-1997 16-06-1998 14-12-1999 26-10-1999 03-06-1997 05-08-1997 14-07-1998	
US 5958672	A	28-09-1999	US 6004788 A AU 6547796 A EP 0839185 A1 JP 2002514894 T WO 9704077 A1 US 2002172944 A1 US 2002037505 A1 US 2002058254 A1 US 6057103 A US 6030779 A US 6280926 B1 US 2002051987 A1	21-12-1999 18-02-1997 06-05-1998 21-05-2002 06-02-1997 21-11-2002 28-03-2002 16-05-2002 02-05-2000 29-02-2000 28-08-2001 02-05-2002	